

CLAIMS

1. A tube support device comprising a channel shaped portion and a cap portion, the channel shaped portion having a bottom wall, a first sidewall and a second sidewall, each sidewall having an upper end and a lower end and extending upwardly from opposite sides of the bottom wall to define a channel, the cap portion latching across the upper ends of the first sidewall and the second sidewall to form, in combination with the channel shaped portion, a tunnel for receiving a tube, said tunnel having a longitudinal axis, the channel shaped portion having at least one bottom leaf spring portion extending angularly toward the longitudinal axis of the tunnel for biasing a tube against movement toward the bottom wall of the channel shaped portion, at least one first side leaf spring portion extending angularly toward the longitudinal axis of the tunnel for biasing a tube against lateral movement toward the first sidewall, and at least one second side leaf spring portion extending angularly toward the longitudinal axis of the tunnel for biasing a tube against lateral movement toward second sidewall, and wherein the cap portion, when in the latched position, has at least one upper leaf spring portion extending angularly toward the longitudinal axis of the tunnel for biasing a tube away from the cap portion.
2. A tube support device as in claim 1 further comprising a support leg portion extending away from a lowermost wall of the channel shaped portion for spacing the channel shaped portion away from a base structure.
3. A tube support device as in claim 2 wherein the support leg portion extends from the bottom wall and has a lower end and a foot portion extending laterally away from

the lower end, said foot portion having an aperture therethrough for receiving a fastener for affixing the tube support device to the base structure.

4. A tube support device as in claim 3 wherein the foot portion extends laterally from the lower end of the support leg portion in a direction transverse to the longitudinal axis of the tunnel to facilitate affixing the tube support device to the base structure when a tube is supported by the tube support device.

5. A tube support device as in claim 1 wherein the channel portion has a first end and a second end and a pair of bottom leaf spring portions extending in opposite directions from the first end and the second end toward the longitudinal axis of the tunnel.

6. A tube support device as in claim 5 wherein the pair of bottom leaf spring portions extends from the bottom wall of the channel shaped portion.

7. A tube support device as in claim 1 wherein the cap portion, when in the latched position, has a first end and a second end, and a pair of upper leaf spring portions extending in opposite directions from the first end and the second end angularly toward the longitudinal axis of the tunnel.

8. A tube support device as in claim 1 wherein the at least one first side leaf spring portion extends from an upper portion of the first sidewall toward the bottom wall and the at least one second side leaf spring portion extends from an upper portion of the second sidewall toward the bottom wall.

9. A tube support device as in claim 1 wherein the cap portion is connected to the upper end of the first sidewall by a hinge means, and, when in a closed position, to the upper end of the second sidewall by a latch means.
10. A tube support device as in claim 1 wherein the leaf spring portions are generally triangularly shaped and attached to the channel shaped portion and the cap portion along a base edge of the triangle.
11. A tube support device as in claim 1 which is constructed of injection molded plastic.
12. A tube support device as in claim 9 which is of unitary construction and is formed of injection molded plastic.
13. A tube support device as in claim 12 wherein the leaf spring portions exert a bias force in the range of 1 to 10 kg.
14. A method of using a tube support device as in claim 1, said method comprising positioning a tube in the channel shaped portion, and moving the cap portion from an unlatched position to a latched position, wherein the tube is restrained from movement toward the bottom wall of the channel shaped portion by the at least one bottom leaf spring portion, and is restrained against movement toward the first sidewall by the at least one first side leaf spring portion, and is restrained against movement toward the second side wall by the at least one second side leaf spring portion, and is restrained against movement toward the cap portion by the at least one upper leaf spring portion.

15. A method of using a tube support device as in claim 14 further comprising affixing the tube support device to a base structure.

16. A method of using a tube support device as in claim 14 further comprising partially compressing the leaf spring portions by action of the tube as the cap portion is moved from the unlatched position to the latched position.